
Chlorospatha kressii (Araceae), a New Compound-leaved Species from Chocó Department, Colombia

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The Andean-centered aroid genus *Chlorospatha*, belonging to the tribe Caladieae of the subfamily Colocasioideae, was regarded until a decade ago as monotypic, consisting only of *C. kolbii* Engl. (an enigmatic compound-leaved species still known only from a few century-old illustrations and a single, fragmentary herbarium specimen). In 1981, Madison redefined the genus to include the four species previously comprising *Caladiopsis*, which differed from *Chlorospatha* only in having simple rather than compound leaves. Since that time many new species have been described from Colombia, Ecuador, and Peru, bringing the total for the genus to 15 by 1986. Grayum (1986) predicted that many more species remained to be discovered and that, judging from intriguing but sterile herbarium specimens, the Chocó region of Colombia would be a rich source for such novelties.

The present paper describes a distinctive new *Chlorospatha*, not previously represented by sterile material, from Chocó Department.

Chlorospatha kressii Grayum, sp. nov. TYPE: Colombia. Chocó: ca. 10–15 km S of Quibdó on road to Istmina (Panamerican Hwy.), and 8–10 km E on road to petroleum exploration camp, ca. 90 m, 5°35'N, 76°37'W, 9 July 1986, Grayum *et al.* 7643 (holotype, COL; isotypes, MO, CHOCO). Figures 1, 2.

Planta terrestris, rhizomatosa; rhizoma horizontale vel apice erectum usque 2.5 cm latum in statu vivo; petiolus 25.1–30.5 cm longus; lamina membranacea 11–13(–14)-pedatisecta foliolis plerumque anguste oblanceolatis versus basim angustatis apice sensim longiacuminatis utrinque fere glabris margine aliquantum undulatis; foliola nervis lateralibus nervum collectivum marginem bene distantem conjunctis; foliolium centrale (9.8–)21.0–22.1 cm longum (0.8–)2.1–3.2 cm latum foliola lateralia quintum utroque latere 4.9–12.5 cm longa 1.0–2.2 cm lata; inflorescentiae ad usque 3, pedunculis gracilibus 8.0–13.7 cm longis; spathe 5.3–6.2 cm longa ca. 8 mm lata non constricta intus atroviolacea; spadix 3.90–4.15 cm longus stipite ca. 5–8 mm longo spathe adnato parte feminea 1.70–2.15 cm longa parte mascula sterili 2.5–4.0 mm longa parte mascula fertili aliquantum clavata 1.3–1.6 cm longa 2.6–2.8 mm lata; flores feminei atque masculi cremei;

flores feminei 1.3–1.5 mm alti 2.0–2.4 mm lati; flores masculi steriles aliquantum fungiformes vel incudiformes 0.7–1.1 mm alti 0.6–0.8 mm lati; flores masculi fertiles 0.8–1.9 mm lati stamine solitario vel 2–3(–4?) connatis; fructus ignoti.

Rhizomatous, terrestrial herb, the rhizome horizontal to apically erect, 0.8–1.0 cm wide when dry, to perhaps 2.5 cm thick when fresh, clothed apically with persistent reddish brown cataphyll fibers. Cataphylls 3.1–11.3 cm long, 3–6 mm wide, broadly to narrowly lanceolate. Petiole terete, obscurely dark-mottled, 25.1–30.5 cm long, sheathed basally for 1.7–11.8 cm. Lamina membranous, weakly bicolored, matte above, weakly glossy below, pedately compound with 11–13(–14) leaflets, the latter mostly narrowly oblanceolate (broadest above the middle) or (especially the outer ones) narrowly elliptical to lanceolate, narrowed at the base and broadly attached, gradually long-acuminate apically, virtually glabrous on both sides (minutely pubescent along major veins below), the margins virtually entire but somewhat undulate; midrib and primary lateral veins sunken above, convex below, the lateral veins united in a conspicuous collective vein running well inside the margin; tertiary veins visible and slightly darker below; central leaflet (9.8–)21.0–22.1 cm long, (0.8–)2.1–3.2 cm wide; first (innermost) lateral leaflets generally slightly wider; fifth (outermost or next outermost) lateral leaflets 4.9–12.5 cm long, 1.0–2.2 cm wide. Inflorescences to at least 3 per axil, the peduncles very slender, terete, 8.8–13.7 cm long. Spathe 5.3–6.2 cm long, ca. 8 mm wide, not constricted, uniformly green externally, deep violet within (pale yellow-green in apical fourth), with conspicuous reticulate venation when dry. Spadix 3.90–4.15 cm long, on a stipe ca. 5–8 mm long, adnate to spathe in basal ca. 1 cm (i.e., only along stipe and perhaps very base of pistillate region), the axis violet, ca. 1 mm wide; pistillate portion of spadix ca. 1.70–2.15 cm long; sterile staminate portion ca. 2.5–4.0 mm long, the fertile staminate portion somewhat clavate, 1.3–1.6 cm long, 2.6–2.8 mm wide. Flowers of both sexes cream-colored; pistillate flowers broadly conical, 1.3–1.5 mm high, 2.0–2.4 mm wide; sterile staminate flowers somewhat fungoid



Figures 1, 2. *Chlorospatha kressii* (Grayum et al. 7643). —1. Entire plant, showing rhizome, cataphylls and slender peduncles. —2. Example of a large, fully pedate leaf, one half folded over the other; the central leaflet is at the far right.

to anvil-shaped, 0.7–1.1 mm high, 0.6–0.8 mm wide; fertile staminate flowers 0.8–1.9 mm wide, the stamen solitary or 2–3(–4?) united in a syndrium. Fruits unknown.

Distribution. *Chlorospatha kressii* is known only from the type locality, a small enclave of relatively intact, lowland primary forest southeast of Quibdó in Chocó Department, Colombia. At the time of the original collection in 1986, primary forest throughout this region was being actively felled, the most recent damage extending to within a few hundred meters of the only known population of *C. kressii*. Because this site was apparently not protected in any way, it is almost certain that this population has vanished during the last four years. The plants grew “on slopes near (a) stream in deep primary forest,” and should be sought in similar habitats in more pristine parts of the Chocó region.

Live specimens of *Chlorospatha kressii* propagated from cuttings collected at the type locality were still surviving as of February 1989 at The Marie Selby Botanical Gardens (SEL).

The previously known compound-leaved species of *Chlorospatha* are discussed and keyed in Grayum (1986). *Chlorospatha kressii* differs from all of these in its 11–13-pedate leaves. Only two other species, *C. croatiana* Grayum (Colombian specimens) and *C. kolbii*, have been reported to have pedately compound leaves with as many as seven to nine leaflets. *Chlorospatha croatiana* differs markedly from the new species in its generally larger size with much longer petioles (50–70 cm), much broader leaflets (central ones 9–15 cm wide), longer peduncles (13–33 cm), and larger inflorescences.

Chlorospatha kolbii, according to the description in Engler & Krause (1920), differs from *C. kressii* in having much shorter and hence proportionately broader leaflets (central ones 8–10 cm long). It might be argued that the specimens of *C. kolbii* cultivated in Europe during the previous century were poorly grown and depauperate, hence with smaller leaves and fewer leaflets than wild-grown plants. However, the inflorescences of *C. kolbii* are described as larger than those of *C. kressii* in virtually every aspect: spathe (7–8 cm long), entire

spadix (ca. 6 cm long), stipe (1.5 cm long), adnate portion of spadix (2 cm long), sterile staminate portion of spadix (1 cm long), and fertile staminate portion of spadix (3 cm long).

The only existing herbarium specimen purported to represent original material of *Chlorospatha kolbii*, Hort. W. Bull s.n., 20 Sept. 1878 (K) from "South America," was examined in connection with the present investigation. This is a sterile specimen consisting of a single, 9-pedate leaf, with the central leaflet 10.5 cm long. These features accord well with the description of *C. kolbii* and reinforce the notion that *C. kressii* is a different species. Furthermore, the adaxial laminar epidermis of Bull s.n., viewed under low magnification, exhibits a very distinctive whitish-alveolate appearance not observed in available dried material of *Chlorospatha kressii*.

Several distinct *Chlorospatha* species are now known that conform in a general way with the description of *C. kolbii* (e.g., *C. croatica*, *C. gentryi* Grayum, *C. kressii*), and other such species represented only by sterile material are yet to be described. Although it may be annoying that the real *C. kolbii* remains at large, the name must not be

applied arbitrarily and there is every reason to insist on a reasonable correspondence with the protologue.

The new species is dedicated to W. John Kress of the Smithsonian Institution, an observant specialist in large monocots, who was the first to encounter these plants in the field.

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